

Amendments to the Specification:

It is noted that the paragraph numbers refer to the application as published.

Please replace paragraph [0001] with the following new paragraph:

[0001] The present invention relates to the technical field of vertebral prostheses for acting between two adjacent vertebrae to redistribute the overloading created by degeneration of the disk, without preventing articular movements from taking place, and leaving the possibility of following the movements of the spine.

Please replace paragraph [0002] with the following new paragraph:

[0002] Prostheses comprising a portion made of deformable material are already known. In French patent No. 2 623 085 in the name of Francis Breard, there is described a kind of spacer having two ends and suitable for being inserted between the spinous processes of two adjacent vertebrae. The spacer is held by means of ligaments passing through lateral holes.

Please replace paragraph [0003] with the following new paragraph:

[0003] A prosthesis of a very similar design is described in European patent No. 0 322 334 to inventor Jean-Jacques Bronsard. One or more hollow resilient cylindrical pads are described therein as being interposed between the spinous processes of two adjacent vertebrae, and as being secured by means of a ligament passing through the pads. Other inter-process prostheses of a variety of shapes are described in French patents Nos. 2 717 675 and 2 775 183 to Dr. Jean Taylor.

Please replace paragraph [0004] with the following new paragraph:

[0004] Although those known devices provide results that are advantageous in terms of disk spacing, by being secured between spinous processes, they nevertheless suffer from drawbacks that are not negligible since they do not provide any means for recovering the ability to support loads that are appropriate to physiological requirements. The absorption of load transmission between vertebrae has until now remained partial only.

Please replace paragraph [0005] with the following new paragraph:

[0005] Since such prostheses interposed between the spinous processes are off-center relative to the center of gravity of the vertebrae bodies, which carry the maximum load, whereas the major fraction of the load passes via an axis situated in the centers of the vertebral bodies.

Please replace paragraph [0006] with the following new paragraph:

[0006] The first disadvantage of such prior devices is that only a portion of the load is absorbed by the prosthesis, thus preventing it from having a damping function that is fully effective.

Please replace paragraph [0007] with the following new paragraph:

[0007] The second disadvantage is that the articular mobility of prostheses of that type is small, with full control over flexing, extension, and rotation of the spine then being substantially limited.

Please replace paragraph [0008] with the following new paragraph:

[0008] The third disadvantage is that those known devices are all invasive since it is necessary to remove the healthy posterior ligament or to damage the adjacent lateral muscles in order to put them in place.

Please replace paragraph [0009] with the following new paragraph:

[0009] The vertebral implant of the present invention remedies such drawbacks by means of its materials, its functional aspect, and its shapes specifically adapted to providing effective damping as close to possible to the vertebral canal. The presence of flexible resilient bodies for insertion between two adjacent vertebrae in the space between the under- and overlying laminae beside the region fitted with the implant, stabilizes the support in an anterior/posterior direction by using integral retaining means.

Please replace paragraph [0011] with the following new paragraph:

[0011] The bearing point of the functional unit, on which the load absorbed by the spine is concentrated while it is in movement, is positioned gradually towards the posterior portion of the medulary canal and is situated exactly in the inter-laminar portion away from the articular portions of the vertebrae, as close as possible to the medulary center for distributing the forces

accommodated during movements of the spinal column.

Please replace paragraph [0016] with the following new paragraph:

[0016] Its compact size makes it possible to reduce the amount of healthy ligament and muscle holding the articular portions that needs to be removed. While the implant is being put into place, the preparation space is restricted to a minimum that can accept the thrust from the implant between the laminae in the region fitted with the implant, while leaving a maximum amount of tissue intact. The implant is micro-invasive.

Please replace paragraph [0017] with the following new paragraph:

[0017] The invention consists in an intervertebral support enabling an anatomical intervertebral space to be maintained and restoring three-dimensional mobility to the region fitted with the implant, and it comprises a spacer with retaining means. The invention comprises two portions.

Please replace paragraph [0018] with the following new paragraph:

[0018] A posterior portion provides mobility and damping in the region fitted with the implant. It comprises retaining means serving to prevent the support migrating towards the anterior portion of the spine, by pressing against the laminae. An anterior portion, suitable for being received between the laminae of the vertebrae restores an anatomical intervertebral spacing.

Please replace paragraph [0019] with the following new paragraph:

[0019] Retaining means, constituted by lateral shoulders, transverse projections on the top and bottom portions of the implant, and grooves molded in the anterior portion, enable the implant to be held in place and kept pressed in abutment at the junction between the laminae and the processes. This makes it possible to prevent the support from migrating towards the anterior portion of the spine.

Please replace paragraph [0020] with the following new paragraph:

[0020] The lateral shoulders of the posterior portion may be constituted by large symmetrically-opposite areas, set back from the anterior portion and suitable for being received against the laminae of the vertebrae as close as possible to the articular portions. The shoulders may also

have small area, being of the type constituted by projecting bulges that are symmetrically opposite and set back from the anterior portion, being suitable for releasing movement of the vertebral articular portions.

Please replace paragraph [0021] with the following new paragraph:

[0021] The height of the lateral shoulders does not exceed the greatest height of the posterior portion of the support and they are narrow in width compared with the support taken as a whole.

Please replace paragraph [0022] with the following new paragraph:

[0022] The posterior portion includes a bottom portion that is carried on the top portion of the underlying process.

Please replace paragraph [0023] with the following new paragraph:

[0023] In a variant design, this posterior portion serving to damp movements between two adjacent vertebrae is made to have a prismatic shape of height corresponding to the spacing between the adjacent vertebrae, with at least one corner thereof being rounded, the top portion of the posterior portion of the spacer being triangular in shape, so as to receive the tip of the junction formed by the laminar and the process. This shape gives stability between the vertebrae over- and underlying said region fitted with the implant.

Please replace paragraph [0024] with the following new paragraph:

[0024] In another design, the posterior portion provides freedom of movement between the top portion of the spacer and the process above the region fitted with the implant, because of the tapering shape of the posterior portion.

Please replace paragraph [0025] with the following new paragraph:

[0025] The posterior portion of the device presents top and bottom surfaces that are flared in their anterior portions, going as far as the transverse projections, and tapering progressively towards the extreme posterior portions of said surfaces, and receiving the junction point formed by the laminar at the process.

Please replace paragraph [0027] with the following new paragraph:

[0027] The core of the posterior portion may support teeth that are spaced apart by furrows, the teeth being opposite in pairs, on the bottom and top portions, enabling the flexibility of the assembly to be varied.

Please replace paragraph [0028] with the following new paragraph:

[0028] The vertical portions of the shoulders in contact with the laminae present portions that are sufficiently concave and tapering towards the posterior lateral portion of the device to release space for the articular portions.

Please replace paragraph [0029] with the following new paragraph:

[0029] The material enabling the modulus of elasticity to be defined is silicone, having hardness in the range 40 to 80 on the Shore A scale. It enables the modulus of elasticity to be defined that is adapted to the stresses that arise while nevertheless serving, at least in part, to allow freedom of movement to the region fitted with the implant. At least the posterior portion thereof is made of silicone.

Please replace paragraph [0033] with the following new paragraph:

[0033] In its middle and extending lengthwise, the posterior portion presents a shallow groove suitable for coming into contact with the process above the region fitted with the implant.

Please replace paragraph [0043] with the following new paragraph:

[0043] In an embodiment, the support is made of silicone having hardness lying in the range 40 to 80 on the Shore A scale, or it is made of polyethylene at the support portions for the laminae.

Please replace paragraph [0044] with the following new paragraph:

[0044] The support is made of biocompatible material, allowing a certain amount of movement along all axes, so as to adapt to the complex movements of the vertebrae. Silicone can vary the damping effect of the implant. Such a support can be obtained by injection molding silicone of a medical grade that is implantable at more than thirty days.

Please replace paragraph [0045] with the following new paragraph:

[0045] In a preferred embodiment, the implant is obtained by overmolding silicone around a loop (12) of polyetheretherketone or of biocompatible metal that is disposed in the center of the anterior portion (1).

Please replace paragraph [0046] with the following new paragraph:

[0046] Ideally, the support is incorporated and self-supporting between the medulary center and the articular axis of the spinal column, as close as possible to the medulary canal but without being in contact with the dura mater. The anterior portion (1) of the support remains as bare silicone so as to avoid fibrosis, thus enabling the implant to be located close to the dura mater. The remainder of the support or implant is covered in a biocompatible knit fabric.

Please replace paragraph [0047] with the following new paragraph:

[0047] In a particular embodiment, the posterior portion (2) of the support is prismatic and comprises a support portions (3) in abutment against the laminae (L) projecting from the anterior portion (1) so as to avoid any possibility of the anterior portion (1) moving towards the medulary canal.

Please replace paragraph [0048] with the following new paragraph:

[0048] The top portion (4) of the posterior portion of the spacer is flared so as to receive the junction point (J) formed by the laminar (L) and the process (E). The bottom portion (5) bears against the top portion of the underlying process (E).

Please replace paragraph [0049] with the following new paragraph:

[0049] The edge (10) of the posterior portion (2) presents a rounded angle. The vertical portion (6) of the bearing surfaces (3) presents a portion (7) that is sufficiently concave to release the space of the articular portions.

Please replace paragraph [0050] with the following new paragraph:

[0050] The retaining means, adapted to the inter-laminar space and enabling optimum adaptation

of the implant comprise two transverse projections (8) molded in the silicone body, one on the top portion (4) of the implant and the other on the bottom portion (5) of the implant, together with two grooves (3a and 3b) in the anterior portion (1). In alternative embodiments, the retaining means, or lateral shoulders, are broad symmetrically-opposite surfaces (13) set back from the anterior portion.

Please replace paragraph [0053] with the following new paragraph:

[0053] In another variant design, the core of the posterior portion supports teeth (16) spaced apart by furrows (17) that are opposite in pairs on the top and bottom surfaces and that enable the flexibility of the assembly to be varied.

Please replace paragraph [0055] with the following new paragraph:

[0055] Another variant design consists in a shallow groove (14) being molded lengthwise in the middle of the top portion (4) of the posterior portion (2).

Please replace the Abstract with the following new paragraph:

A vertebral support for positioning between the laminae of the vertebrae. The support may comprise an anterior portion inserted between the laminae of the vertebrae, suitable for giving an anatomical intervertebral spacing, and a posterior portion providing mobility in the region fitted with the implant. A retaining member may limit displacement of the support by shoulders projecting from the anterior portion of the support, and by two transverse projections.